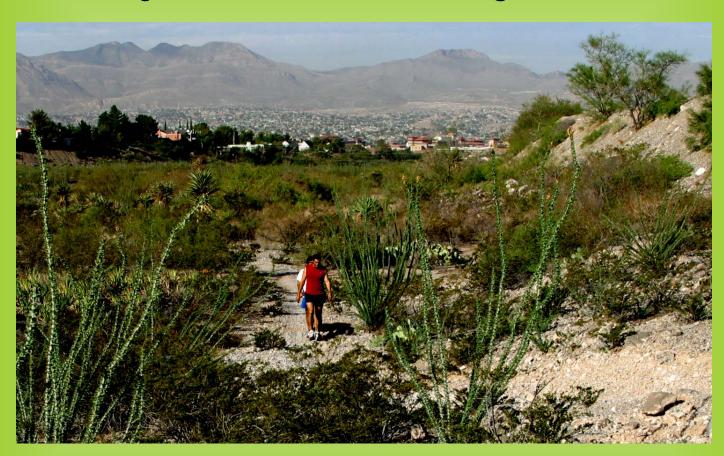
# Arroyos and Open Space: Enhancing Quality of Life for Our Neighborhoods



R. Alan Shubert, P.E. Development Services

As far back as 1925 El Paso's leaders recognized open space as one of the community's key assets.



The region's natural beauty, the mountains, valleys, river, and wetlands all contribute to our quality of life.



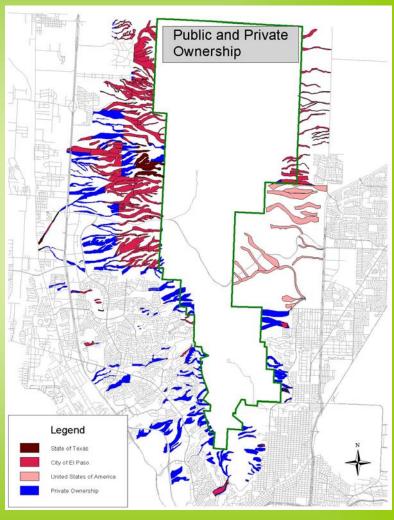
# City Council appointed a committee to address community concerns.

- Committee <u>agreed</u> on the need to preserve open spaces in the principle.
- •Committee <u>did not reach consensus</u> on how to designate specific lands for preservation.



Council realized the need to identify specific areas; staff was charged with compiling an inventory.





Upon completing the inventory, staff tried to develop an objective way to select land

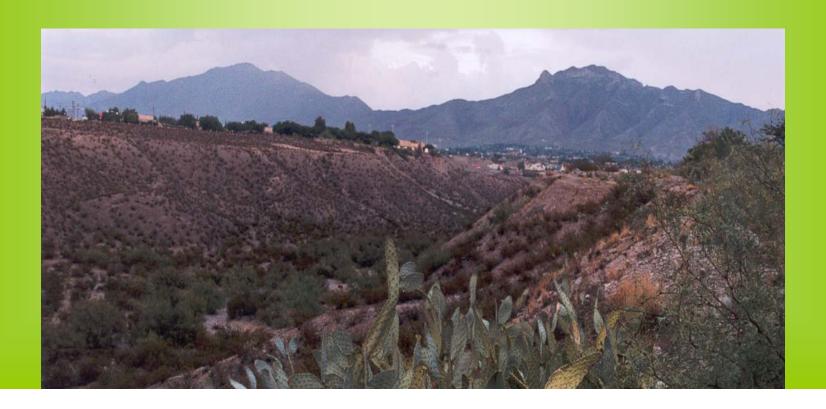
for preservation.



Visual Diversity		6	X
Geological Formations	Unique or valuable formations covering a large portion of the arroyo = 5 points.  None or a small portion = 0 points.	6	x
Archeology	Cultural or pre-historic sites or remains = 5 points. None or a small portion = 0 points.	10	x
Flora	Native plants in significant quantities = 5 points. No plants or very small quantities = 0 points.	10	x
Habitats	High percentage of the area provides very high quality habitats = 5 points.  Very low percentage of the area = 0 points.	10	x
Wildlife Corridors	Very good connectivity to other quality habitats = 5 points. Poor, or no connectivity = 0 points.	10	х
Environmental Condition	High levels of contamination or pollution = 5 points. Clean uncontaminated soils = 0 points.	8	x
Visual Esthetics		7	x
Stormwater Filtration	Excellent stormwater filtration attributes = 5 points. Immediate, poor quality runoff = 0 points.	1	x
Surrounding Land Use Patterns	The existing or planned future land uses strongly compliment the protection of the arroyo = 5 points. Very poor land uses or expectations = 0 points.	1	x

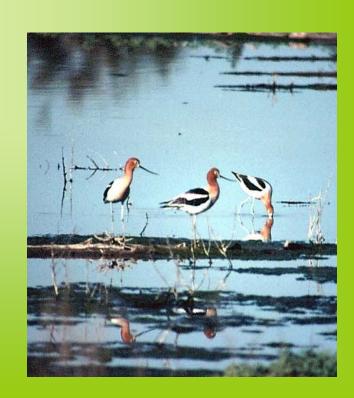
# Numerical analysis could not capture important differences.

- •For example, Resler Canyon could not be not distinguished from surrounding urban land.
- Resler Canyon ranked below various nearby arroyos.



#### Three lessons:

- Getting useful data on scientific aspects such as biology, geology or archeology is expensive and time consuming.
- Important values of arroyos are defined by the community: beauty, recreational use, access.
- Other natural open land besides arroyos can possess the same high value to the community.



#### **Recommendations:**

- Initiate a community-wide planning process to identify all the important open spaces in the City
  - Combine objective data with public input
    - Simultaneously create the toolbox for implementation





#### **Recommendations:**

## Open Space Plan Process

Community Involvement lead by Consultants

- Will take approximately five months
- Will cost approximately \$50,000

- Will give very good results
- Will ensure strong community buy-in

#### **Recommendations:**

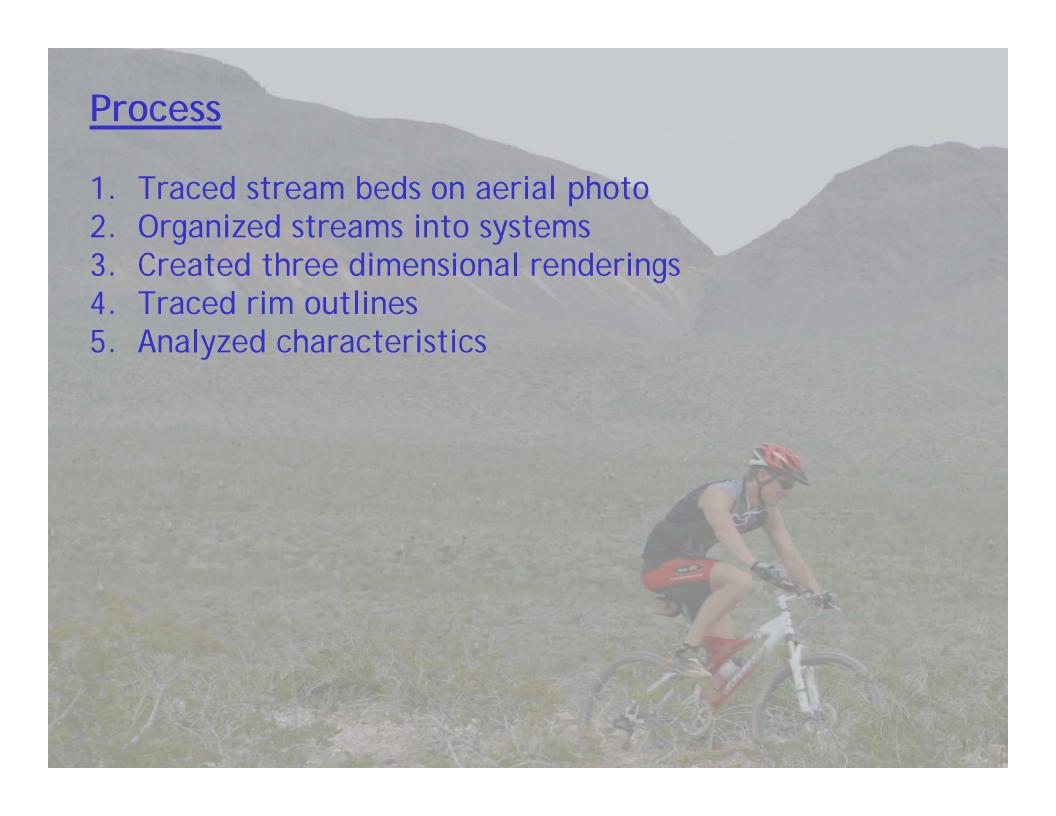
### Separate processes for:

"Public Lands" (mostly held by PSB)

"Private Lands" (areas surrounded by development)

- Use a focused process for the Private Lands
- Develop Code Amendments to allow incentives on Private Lands
- Community Wide process for the Public Lands.
- Adopt joint Resolution in conjunction with the Public Service Board stating no public lands will be sold without a Land Study until the above Open Space Plan is completed

## **Inventory Details**

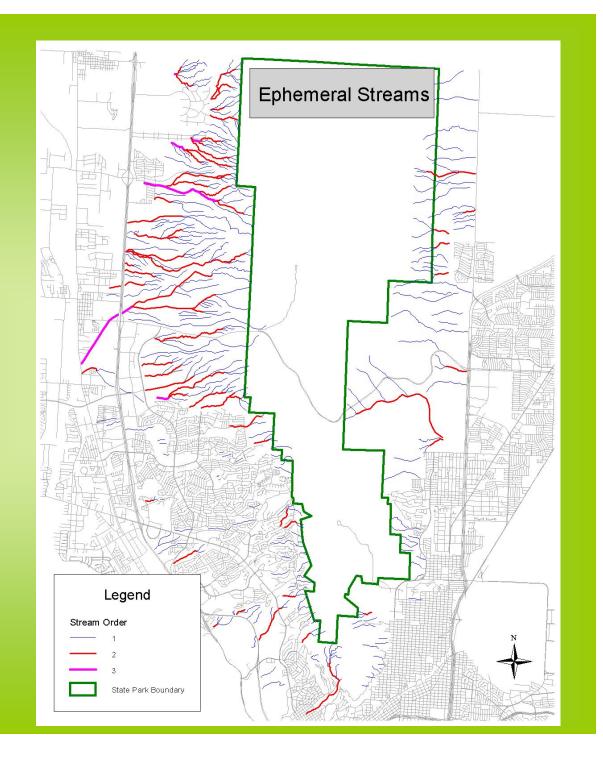


### One foot aerial photos



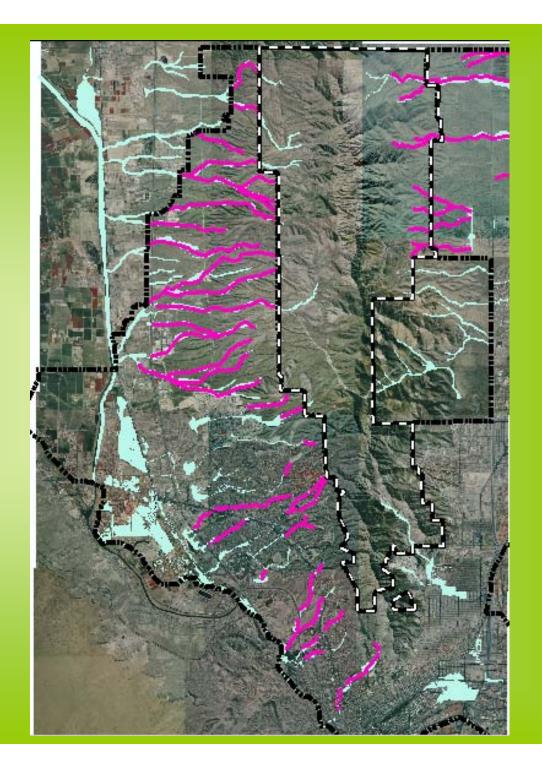
#### Natural Intermittent Stream Beds

identified on aerial photos

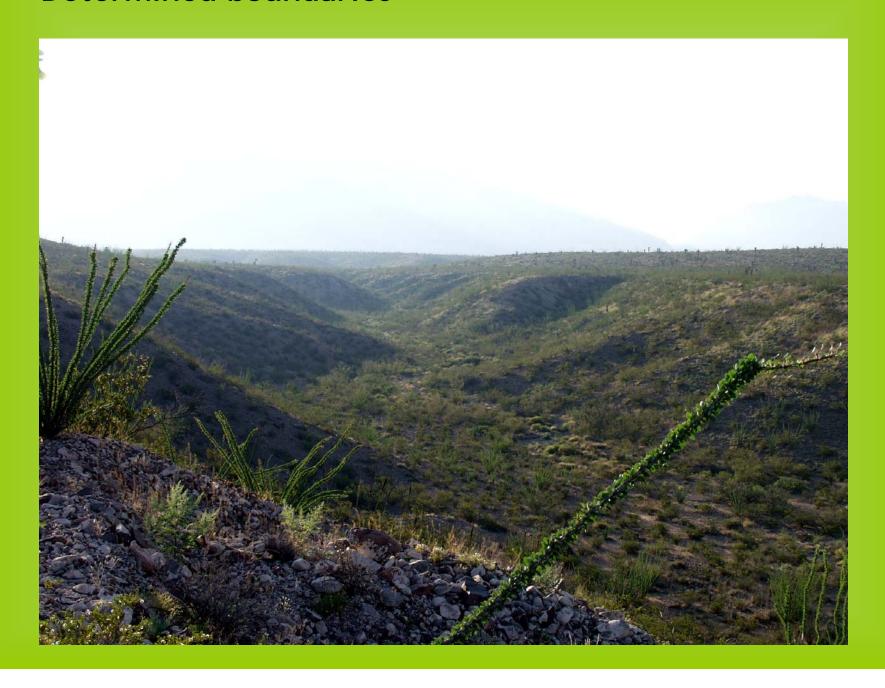


FEMA
Recognized
Flow Paths

Organized
streams based
on the 44
numbered flow
paths



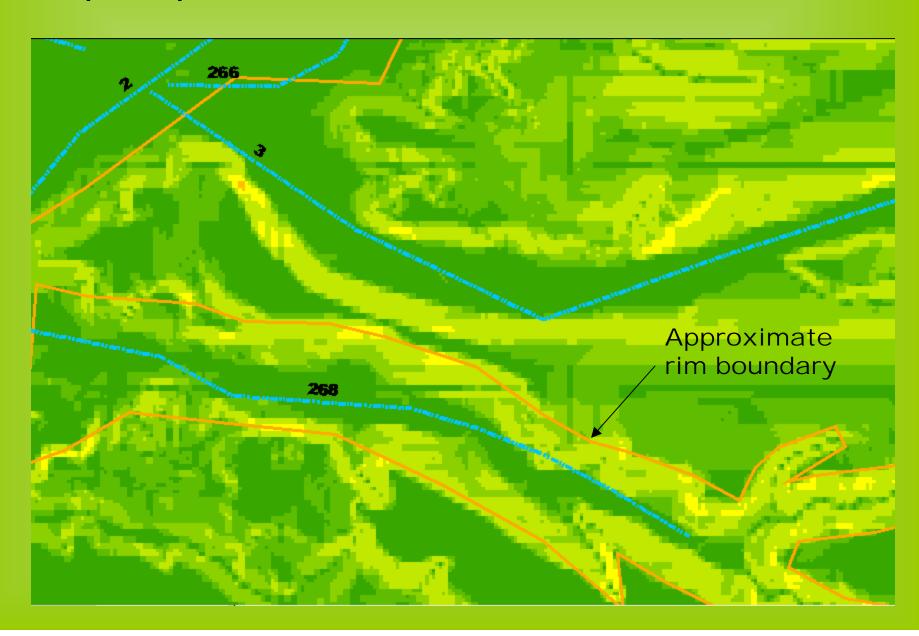
#### **Determined boundaries**



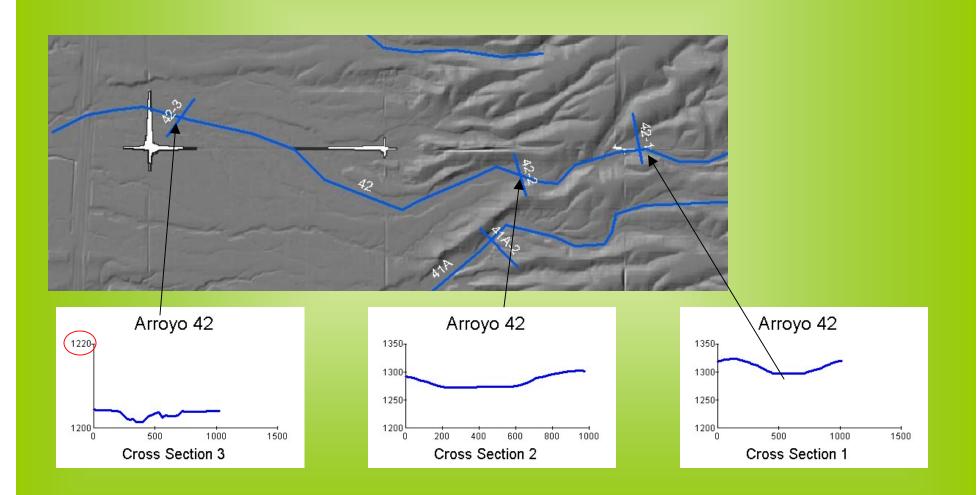
### Triangulated Irregular Network (TIN)



### Slope map



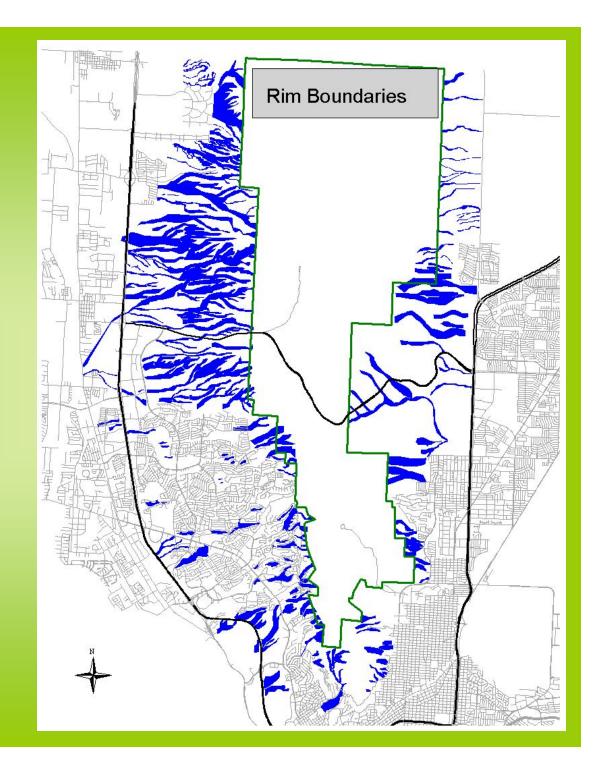
#### **Cross sections**



## Results

Two Hundred Eighty Five arroyos

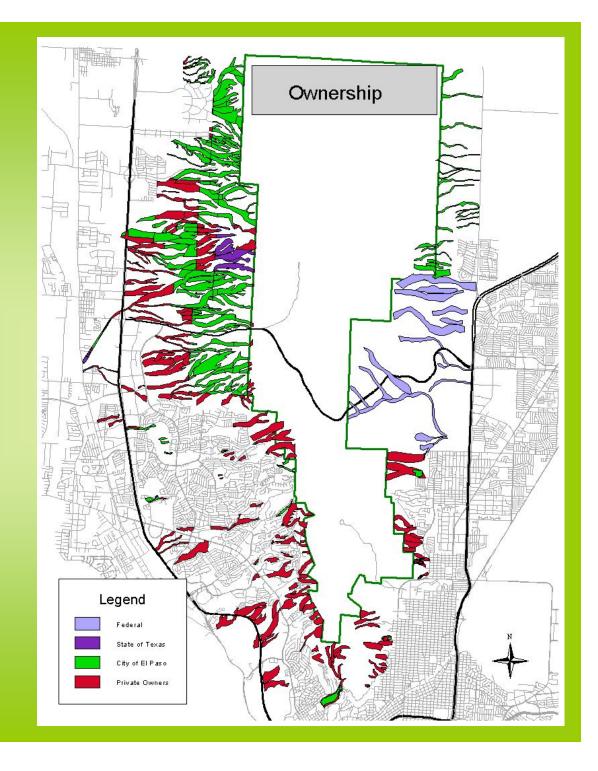
8,910 acres



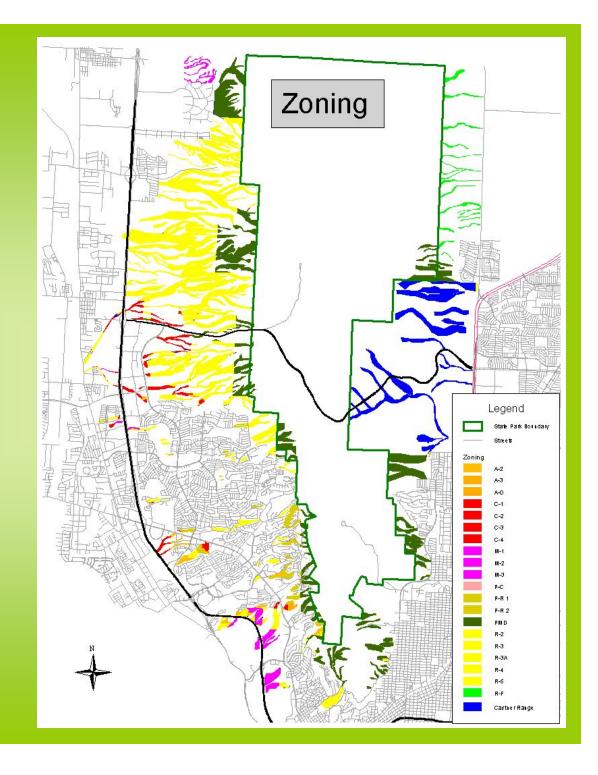
	Total	City of	Federal	State of	Private	
	Area	El Paso		Texas	Owners	
	8910	3704	1074	271	3861	
-	100%	41.5 %	12.1%	3.0%	43.4%	
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109 arroyos are wholly private

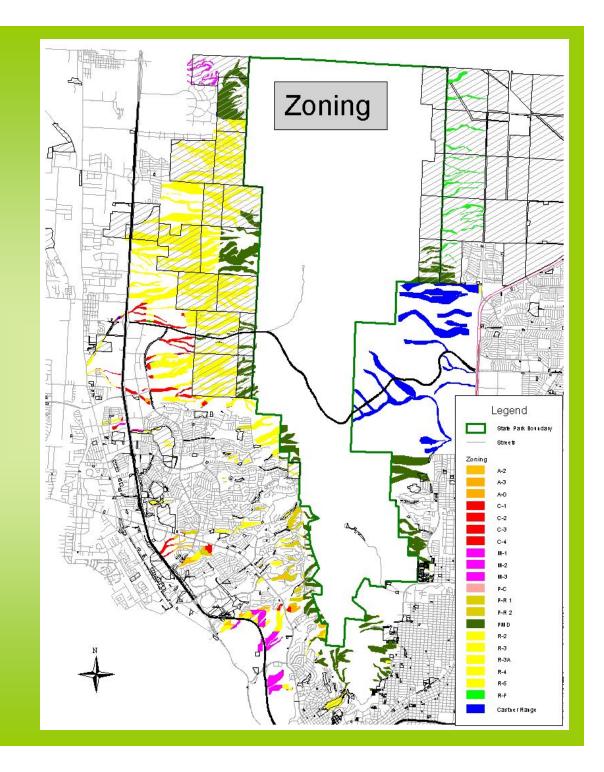
70 more are partly private



Zoning
50% zoned R-3
27% zoned PMD

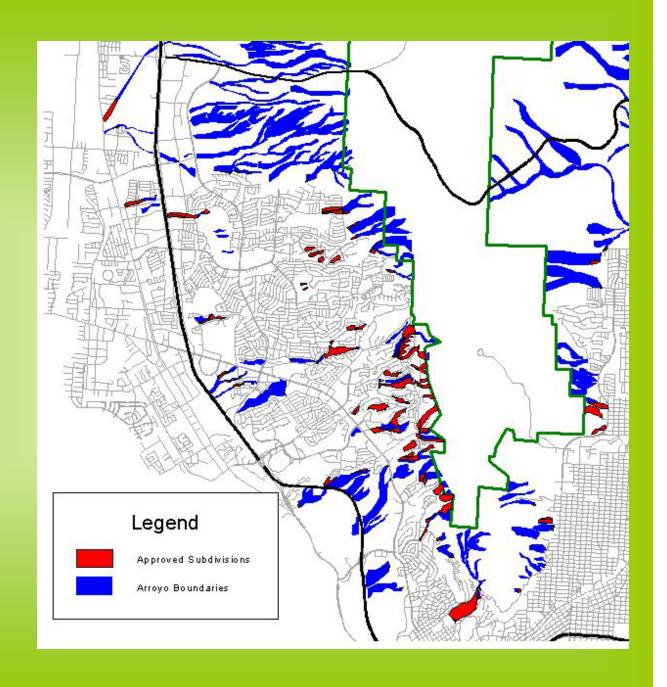


Zoning
50% zoned R-3
27% zoned PMD



**Subdivisions** 

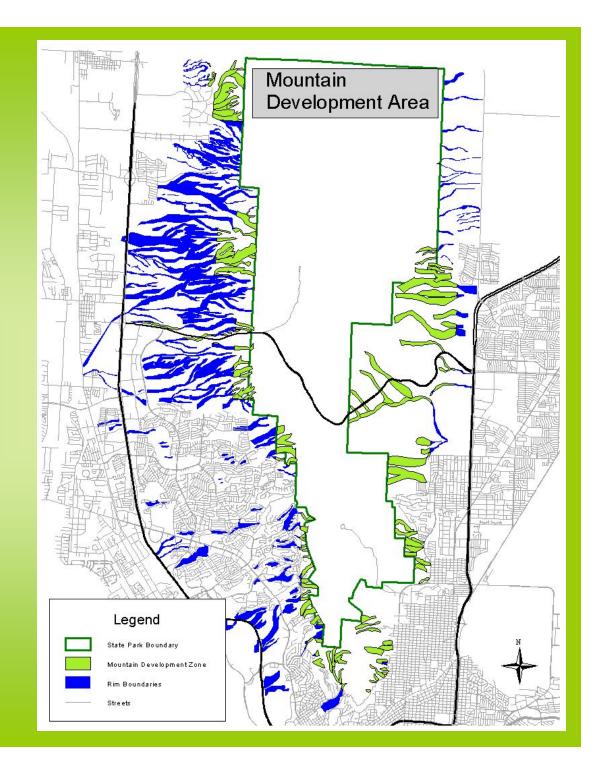
85 arroyos have at least 1 acre subdivided



Mountain

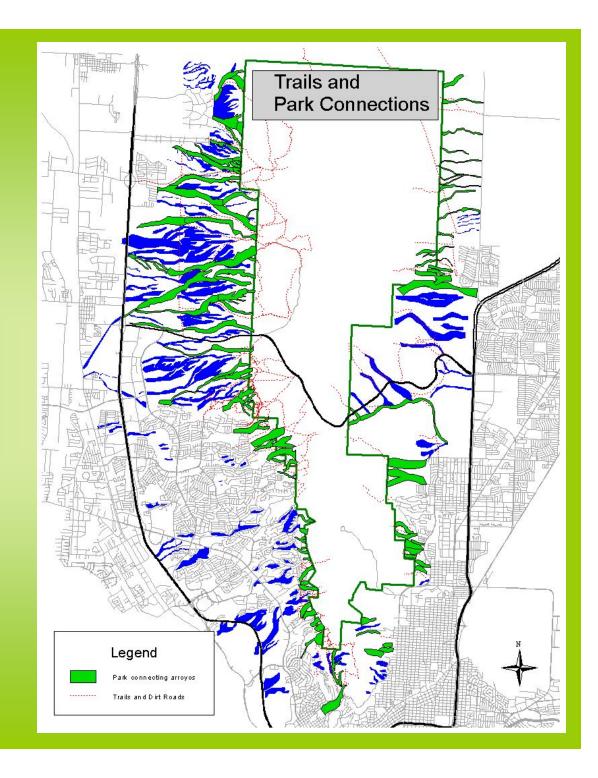
Development Area

123 arroyos have at least part in MDA



Franklin
Mountain
State Park
and informal
trails

108 arroyos lead to the park with no intervening roads



# Detailed statistics are available in the report

Arroyo ID		Area in	Stream		Width	Percent	Percent	Percent	Percent	Percent	City	GLO	Sub- divided	MDA	Common	Corridor to	contains
Number	NAME	Acres	Order	1				Federal				Acres	acres	acres	open space		a trail
1	Thunder Canyon (8A)	23.73	1	3068	337	0%	0%		100%	0%		0.00	23.73		0.00		
	Moondale	9.47	1		325	0%	0%	0%	100%	0%		0.00	9.47				
3	Arroyo 8C	13.15	1	1996	287	100%	0%	0%	0%	0%	13.15	0.00	0.05				
4	Colinas Coronado (8B)	13.26	2	1853	312	0%	0%	0%	100%	0%		0.00	13.24		10.40		
5	Pinnacle north (8B)	12.93	1		503	0%	0%	0%	100%	96%		0.00	7.69		0.00	yes	
	Camino Cuesta	14.26	1	2145	290	0%	0%	0%	100%	91%		0.00	0.39	12.96		yes	
	Upper Silver Springs (8)		2		710	0%	0%	0%	100%	0%	0.00		39.43		0.00		
8	Wildwood system (arro		1		406	0%	0%	0%	100%	0%	0.00		28.62				
9	Sunstone (8D)	6.00	1	1309	200	0%	0%		100%	0%		0.00	6.00		4.54		
	Morningstar	53.57	1	3342	698	0%	0%	0%	100%	0%		0.00	28.04				
	Our Lady of Lebanon	15.02	1	1751	374	0%	0%	0%	100%	0%	0.00		15.02				
	Cedar Pointe	4.44	1	754	256	30%	0%	0%	70%	0%	1.33		4.44				
	Morehead School	8.55	1	958	389	0%	0%	0%	100%	0%		0.00	0.00				
	Lower Wildwood	3.82	1		140	0%	0%	0%	100%	0%		0.00	0.03				
	Resler Canyon(arroyo 5		2	5053	736	0%	0%		100%	0%	0.00		0.61				
	Arroyo Park System (2		2		413	0%	0%	0%	100%	100%		0.00		23.30		yes	yes
	Arroyo Park System (2		1	2900	327	0%	0%	0%	100%	100%		0.00		21.76		yes	yes
	Owl Canyon (21A)	41.62	1	4221	430	0%	0%	0%	100%	200/	THE STORY		10 22	15.00		Luca	luan
19	Flow Path 42	195.04	2	11695	726	20%	37%	0%	3)70					7777			
	Flow Path 38B	23.91	1	5368	194	100%	0%	0%	KOW.				Franklin Mount	ains State Par	k		
	Flow Path 39	51.10	1	5092	437	90%	0%		30%					A CONTRACTOR			
	Flow path 38	45.10	1	3238	607	90%	0%	0%							42		
23	Wildwood system (arro	15.27	1	2227	299	0%	0%	0%	City of El Paso (PSB)						50/1/2		
	Wildwood system (arro		1	2333	277	0%	0%	0%									
25		7.39	1	2004	161	0%	0%	0%	SWIN OF A CONTRACT OF STORE OF								
26		9.05	1	1543	256	0%	0%	0%									
27		18.13	1	1305	605	0%	0%										
28		15.61	1	1649	412	0%	0%										
29		26.52	1	2374	487	0%	0%	0%									
30		23.71	1	1360	759	0%	0%	0%	- 22 Z		Sallo Ju				-11-11/1 N		
31	Flow Path 20A system	35.14	1	3356	456	0%	0%	0%									
	Flow Path 20A system	31.86	1	1777	781	0%	0%	0%									
	Flow Path 41A system	26.30	1	3200	358	100%	0%						30-75	Wat 12	Sewit-		8 14
34		19.11	1	2354	354	30%	0%		8 El Paso County								
35		68.73	1	3815	785	0%	0%	0%		MI CO		AND THE STREET	1-1-18	WITT			<b>y</b>
36	Arroyo 1A	82.62	1	4463	806	0%	0%	0%		THE STATE	Note that		7,10			Derly W.	KKIN _
										504-2			1 1 1 1 1 1	1 5/2			







# Implementation Options

#### Three Techniques to Preserve Open Space

Purchase - pay market value

Regulation - control development by laws

**Incentives - encourage the decision to preserve** 

#### Three Techniques to Preserve Open Space

Purchase - pay market value

Certificates of Obligation, Public Improvement District, bonds, matching private funds

Regulation - control development by laws

Incentives - encourage the decision to preserve

City allocated \$2 million from most recent CO issue for open space preservation

Finding ways to utilize tax assessment district concept

### Three Techniques to Preserve Open Space

Purchase - pay market value

Regulation - control development by laws

Zoning and subdivision changes

Incentives - encourage the decision to preserve

Conservation Subdivision concepts could be incorporated into subdivision rewrite

Precedent is Mountain Development Area

### Three Techniques to Preserve Open Space

Purchase - pay market value

Regulation - control development by laws

**Incentives - encourage the decision to preserve** 

Monetary compensation - tax break, purchase of easement Modification of regulation



The incentives proposed by

"ad hoc committee for water conveyance channels"

# Allow realignment of arterials to minimize arroyo crossings



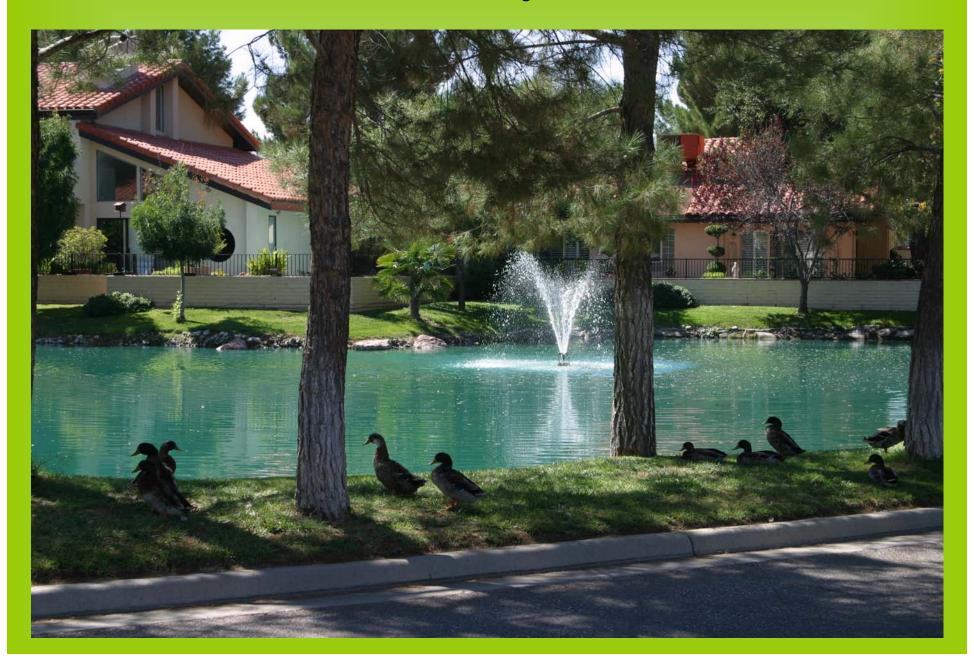
## Allow realignment of arterials to minimize arroyo crossings



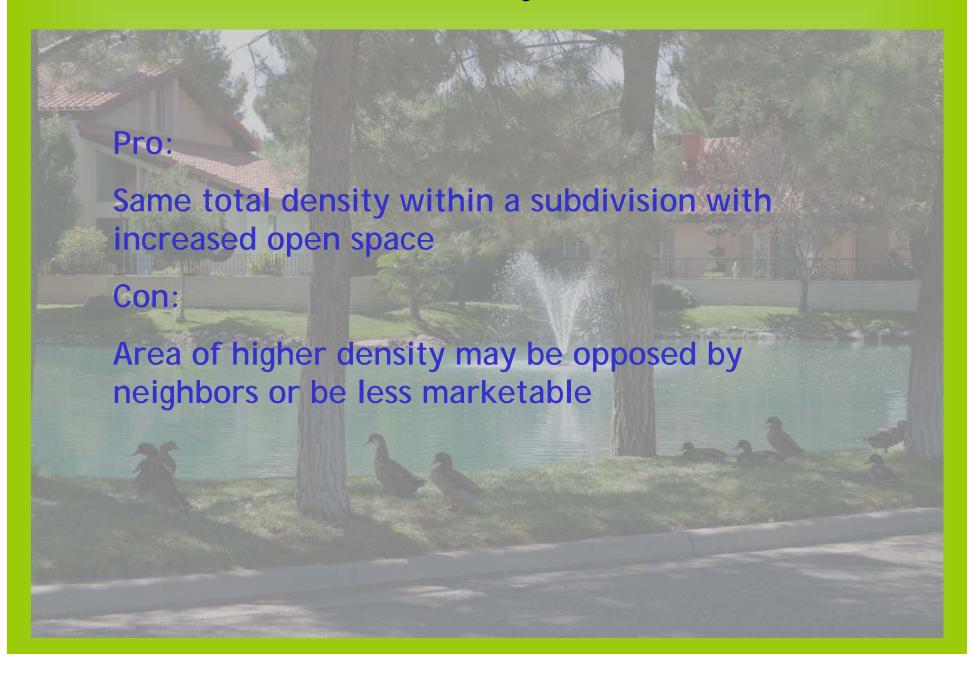




## Allow transfer of density



### Allow transfer of density



# Park credits for natural open space



## Park credits for natural open space







Other incentive possibilities to consider:

**Density bonuses** 

Clustering, irregular or innovative lot shapes

City accepts natural open spaces for maintenance

Transfer of development rights program

Lower fees

**Expedited processing**